

Figure 1:

## Human TCR V $\alpha$ -1.5 (V $\alpha$ -8.2) coding sequence

ATGCTCCTGC TGCTCGTCCC AGTGCTCGAG GTGATTTTAA CTCTGGGAGG  
AACCAGAGCC CAGTCGGTGA CCCAGCTTGA CAGCCACGTC TCTGTCTCTG  
AAGGAACCCC GGTGCTGCTG AGGTGCAACT ACTCATCTTC TTATTCACCA  
TCTCTCTTCT GGTATGTGCA ACACCCCAAC AAAGGACTCC AGCTTCTCCT  
GAAGTACACA TCAGCGGCCA CCCTGGTTAA AGGCATCAAC GGTTTTGAGG  
CTGAATTTAA GAAGAGTGAA ACCTCCTTCC ACCTGACGAA ACCCTCAGCC  
CATATGAGCG ACGCGGCTGA GTACTTCTGT GTTGTGAGTC CTTTTTCAGG  
AGGAGGTGCT GACGGACTCA CCTTTGGCAA AGGACTCAT CTAATCATCC  
AGCCCTATAT CCAGAACCCCT GACCCTGCCG TGTACCAGCT GAGAGACTCT  
AAATCCAGTG ACAAGTCTGT CTGCCTATTG ACCGATTTTG ATTCTCAAAC  
AAATGTGTCA CAAAGTAAGG ATTCTGATGT GTATATCACA GACAAAACTG  
TGCTAGACAT GAGGTCTATG GACTTCAAGA GCAACAGTGC TGTGGCCTGG  
AGCAACAAAT CTGACTTTGC ATGTGCAAAC GCCTTCAACA ACAGCATTAT  
TCCAGAAGAC ACCTTCTTCC CCAGCCCAGA AAGTTCCTGT GATGTCAAGC  
TGGTCGAGAA AAGCTTTGAA ACAGATACGA ACCTAAACTT TCAAAACCTG  
TCAGTGATTG GGTCCCGAAT CCTCCTCCTG AAAGTGGCCG GGTTTAATCT  
GCTCATGACG CTGCGGCTGT GGTCCAGCTG A

Figure 2

Human TCR V $\alpha$ -1.5 (V $\alpha$ -8.2) protein sequence

	FR1
MLLLLVPVLEVIFTLGGTRAQSVTQLDSHVSVSEGT	
	CDR1      FR2
PVLLRCNYSSSYSPSLFWYVQHHPNKGLQLLLKYT	
CDR2	FR3
<u>SAAATLVKGINGFEAEFFKKSETSFHLTKPSAHMSDA</u>	
CDR3	
<u>AEYFCVVSPFSGGGADGLT</u>	
constant	
FGKGGTHLIIQPYIQNP DPAVYQLRDSKSSDKSVCLF	
TDFDSQTNVS QSKDSDVYIT DKTVLDMRSM	
DFKSNSA VAWSNKSDFACAN AFNNSIIPED	
TFFPSPESSCDVKLVEKSFETDTNLFQNLSVIGFRIL	
LL K V A G F N L L M T L R L W S S	

Figure 3:

## Human TCR V $\beta$ -2.1 (V $\beta$ -20.1) coding sequence

ATGCTGCTGCT TTCTGCTGCT TCTGGGGCCA GGCTCCGGGC TTGGTGCTGT  
 CGTCTCTCAA CATCCGAGCT GGGTTATCTG TAAGAGTGGA ACCTCTGTGA  
 AGATCGAGTG CCGTTCCCTG GACTTTCAGG CCACAACTAT GTTTTGGTAT  
 CGTCAGTTCC CGAAACAGAG TCTCATGCTG ATGGCAACTT CCAATGAGGG  
 CTCCAAGGCC ACATACGAGC AAGCGGTCGA GAAGGACAAG TTTCATCA  
 ACCATGCAAG CCTGACCCTG TCCACTCTGA CAGTGACCAG TGCCCCATCCT  
 GAAGACAGCA GCTTCTACAT CTGCAGTGCT AGAGATGGGG GGGAGGGTTC  
 GGAGACCCAG TACTTCGGGC CAGGCACGCG GCTCCTGGTG CTCGAGGACC  
 TGA AAAACGT GTTCCACCC GAGGTCGCTG TGT TTGAGCC ATCAGAAGCA  
 GAGATCTCC ACACCCAAA GCCACACTG GTGTGCCCTG CCACAGGCTT  
 CTACCCCGAC CACGTGGAGC TGAGCTGGTG GGTGAATGGG AAGGAGGTGC  
 ACAGTGGGT CAGCACAGAC CCGCAGCCCC TCAAGGAGCA GCCCGCCCTC  
 AATGACTCCA GATACTGCCT GAGCAGCCGC CTGAGGGTCT CGGCCACCTT  
 CTGGCAGAAC CCCCAGCAACC ACTTCCGCTG TCAAGTCCAG TTCTACGGGC  
 TCTCGGAGAA TGACGAGTGG ACCCAGGATA GGGCCAAACC TGTCACCCAG  
 ATCGTCAGCG CCGAGGCCCTG GGTAGAGCA GACTGTGGCT TCACCTCCGA  
 GTCTTACCAG CAAGGGGTCC TGTCTGCCAC CATCCTCTAT GAGATCTTGC  
 TAGGGAAGGC CACCTTGAT GCCGTGCTGG TCAGTGCCCT CGTGCTGATG  
 GCCATGGTCA AGAGAAAGGA TTCCAGAGGC TAG

Figure 4

# Human TCR V $\beta$ -2.1 (V $\beta$ -20.1) protein sequence

FR1  
MLLLLLLGPGLGAVVSQHPSWVICKSGTSVKIECR

CDR1 FR2 CDR2  
SLDFQATTFWYRQFPKQSLMLMATSNEGSKATYEQ

FR3  
GVEKDKFLINHASLTSLTSTLTVTSAHPEDSSFYICSARD

CDR3  
GGEG

constant  
SETQYFGPGTRLLVLEDLKNVFPPEVAVFEPSEAEISHTQ  
KATLVCLATGFYPDHVELSWVWNGKEVHSGVSTDQPPL  
KEQPALNDSRYCLSSRLRVSATFWQNPРНHRCQVQFY  
GLSENDEWTQDRAKPVTOIVSAEAWGRADCGFTSESYQ  
QGVLSATILYEILLGKATLYAVLVSALVLMAMVKRKDS  
RG

figure 5

# Human TCR V $\alpha$ -1.5 (V $\alpha$ -8.2) protein sequence

FR1  
M L L L L V P V L E V I F T L G G T R A Q S V T Q L D S H V S V S E G T

CDR1 FR2  
P V L L R C N Y S S S Y S P S L F W Y V Q H P N K G L Q L L L K Y T

CDR2 FR3  
S A A T L V K G I N G F E A E F K K S E T S F H L T K P S A H M S D A

Va8.2 CDR3 J45  
A E Y F C V V S P F S G G G A D G L T F G K G T H L I I Q P

constant  
Y I Q N P D P A V Y Q L R D S K S S D K S V C L F T D F D S Q T N V S  
Q S K D S D V Y I T D K T V L D M R S M  
D F K S N S A V A W S N K S D F A C A N A F N N S I I P E D  
T F F P S P E S S C D V K L V E K S F E T D T N L N F Q N L S V I G F R I L  
L L K V A G F N L L M T L R L W S S

figure 6

# Human TCR V $\beta$ -2.1 (V $\beta$ -20.1) protein sequence

MILLLLLLGPGSGLGAVVSQHPSWVICKSGTSVKIECR  
FR1  
CDR1 CDR2  
SLDFQATTMFWYRQFPKQSLMLMATSNEGSKATYEQ

FR3  
GVEKDKFLINHASLTSLTTLVTSAHPEDSSFYICSARD

CDR3 J2.5  
GGEGSETQYFGPGTRLLVL

Constant 2  
EDLKNVFPPEVAVFEPSEAEISHTQKATLVCLATGFYPDH  
VELSWWVNGKEVHSGVSTDPPQLKEQPALNDSRYCLSS  
RLRVSA<sup>1</sup>TFWQNP<sup>2</sup>RNH<sup>3</sup>RC<sup>4</sup>VQ<sup>5</sup>FYGLSENDEWTQDRAKP  
VTQIVSAEA WGRADCGFTSESYQQGVLSATILYEILLGK  
ATLYAVLVSALVLMAMVVKRKDSRG

Figure 7

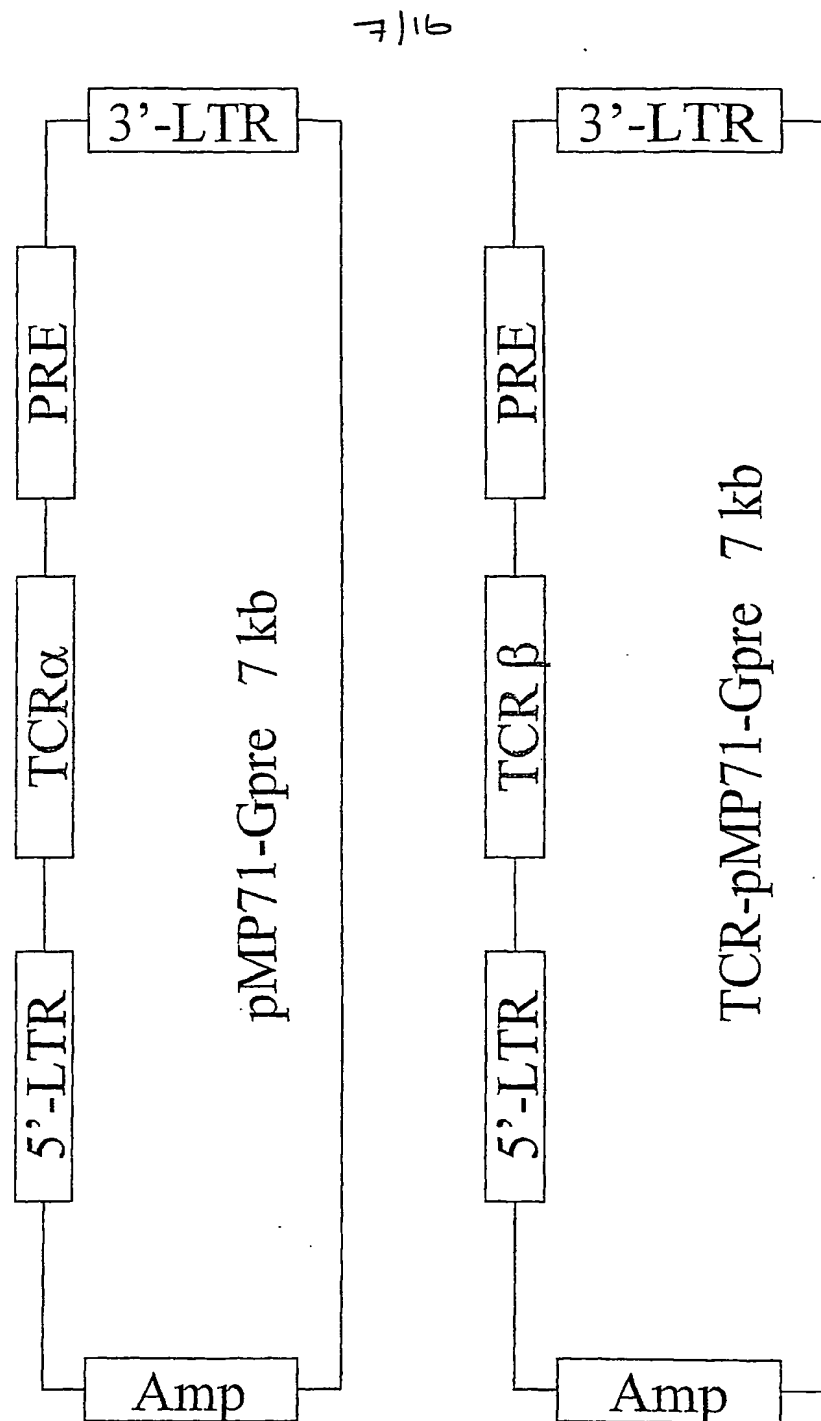
**TCR-retroviral constructs**

Figure 8

# TCR Expression in Human PBMC after transduction

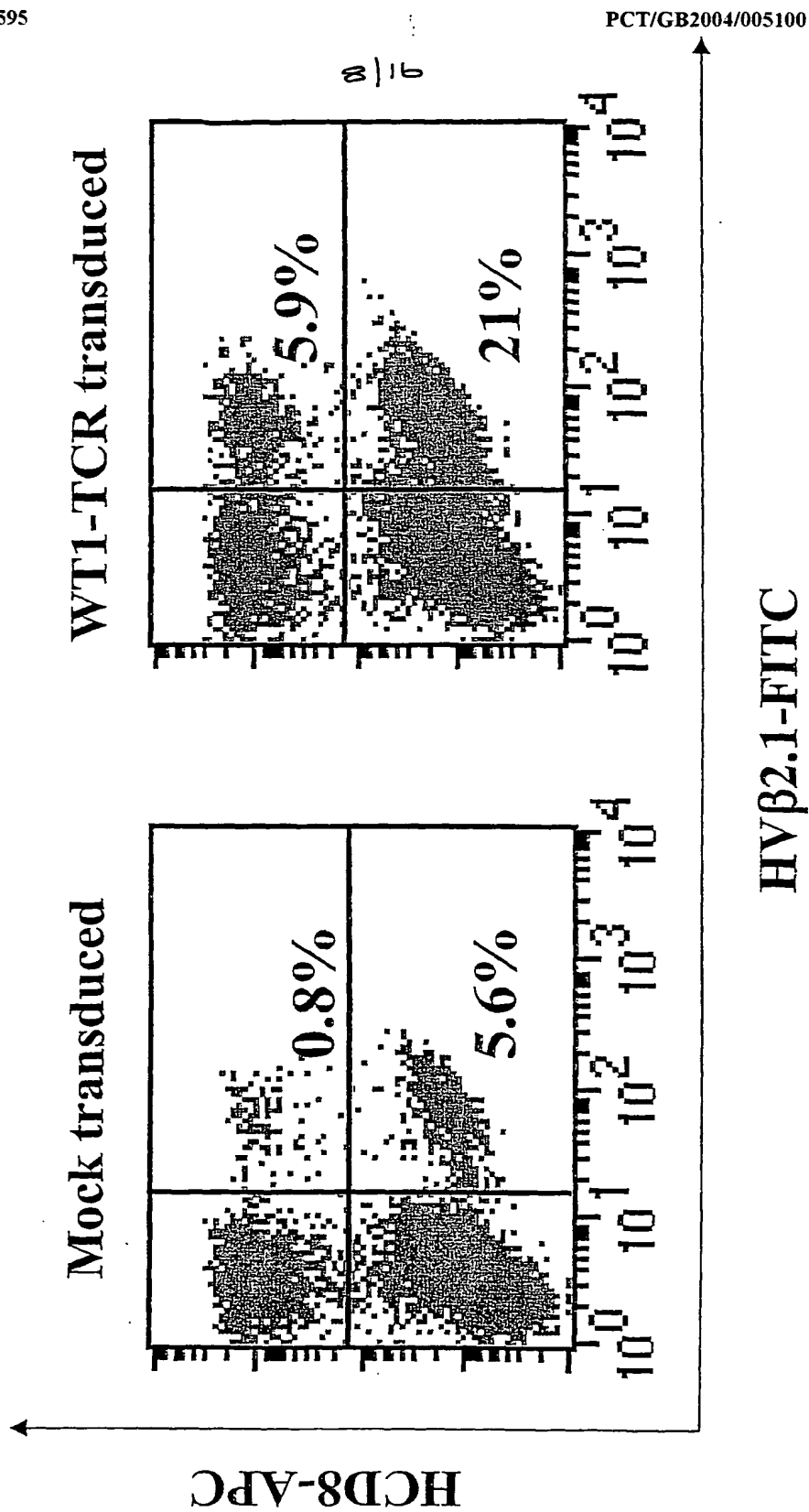
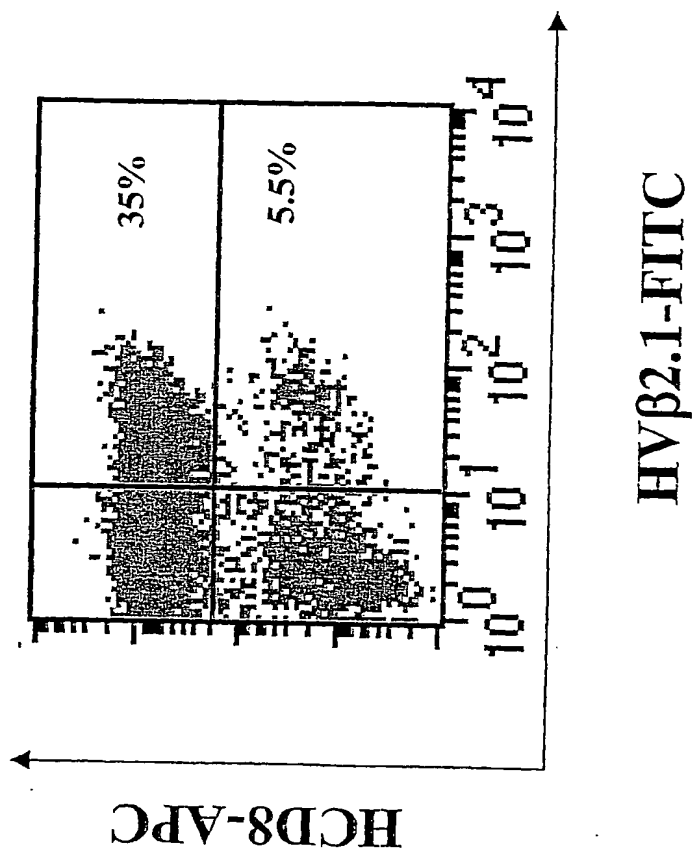




Figure 9

**Increase of CD8<sup>+</sup>-Vb2.1<sup>+</sup> T Cells  
after antigen stimulation**



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Figure 10

TCR specific for pWT126 transduced PBMC

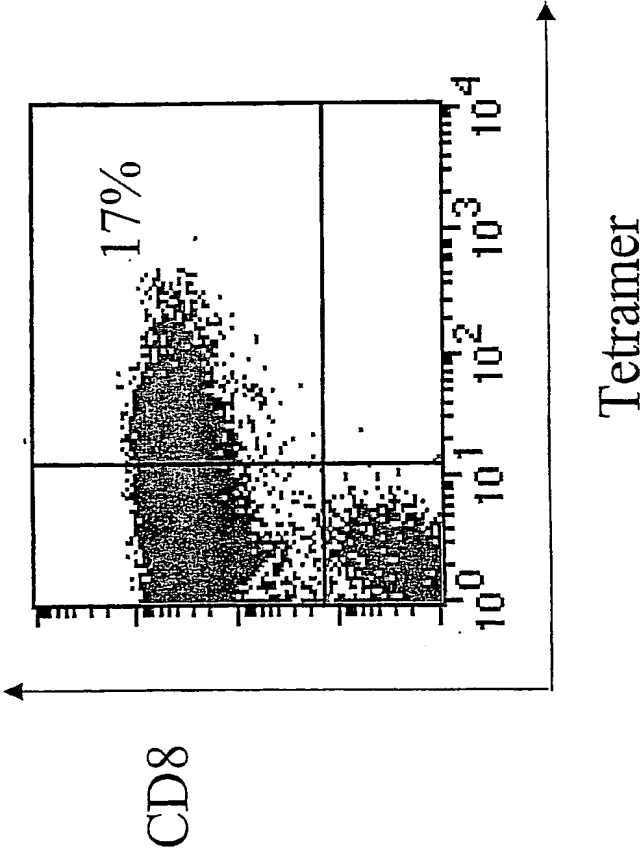


Figure 17

TCR transduced bulk T cells show pWT126-specific killing activity

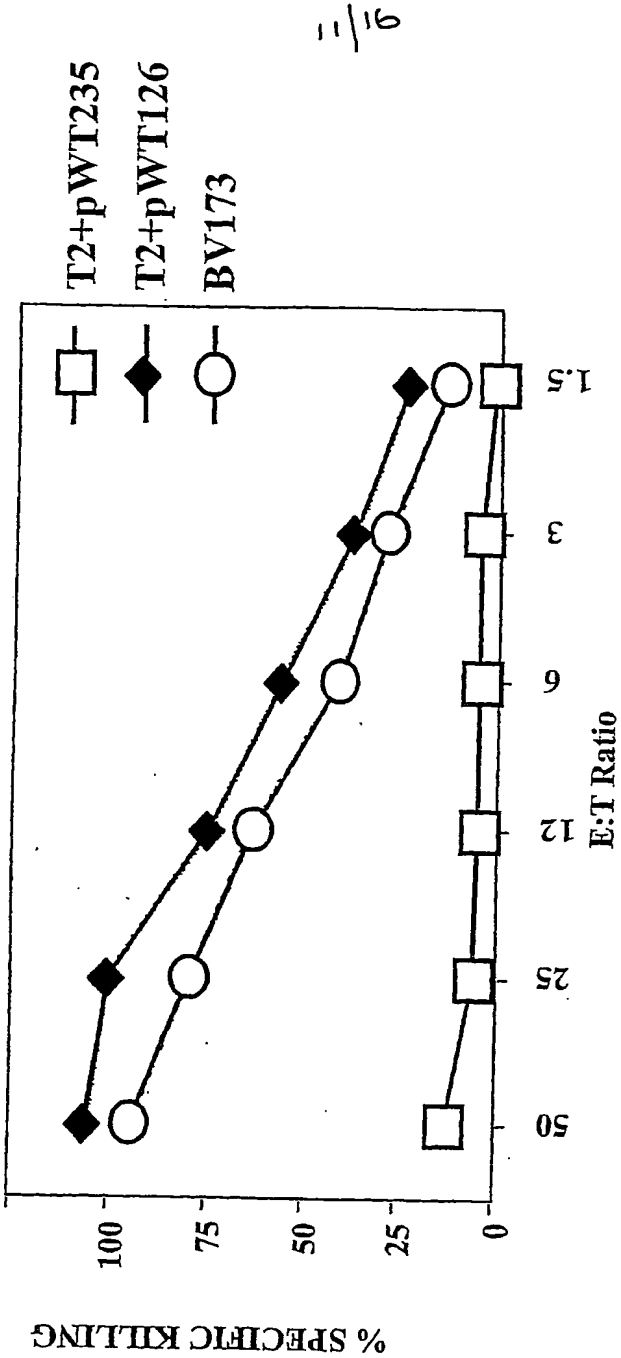


Figure 12

TCR transduced CD8+ T cells show pWT126-specific killing activity

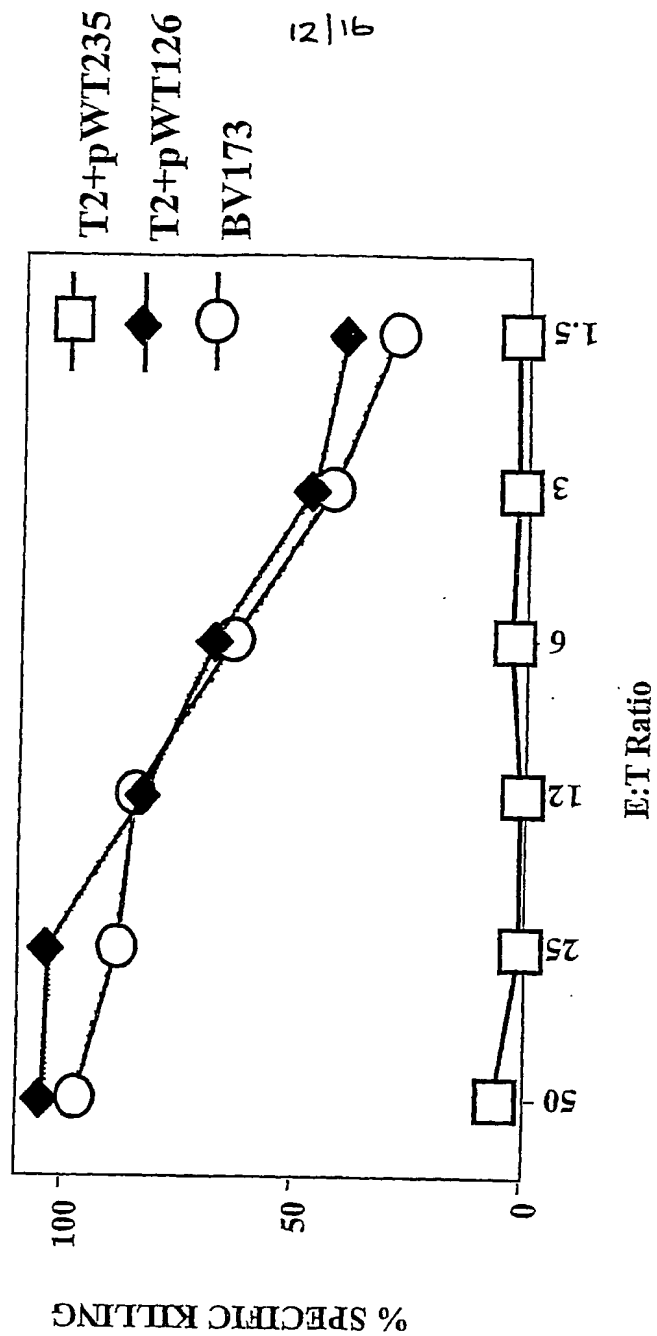


Figure 13

TCR specific for pWT126 transduced  
PBMC sorted CD4

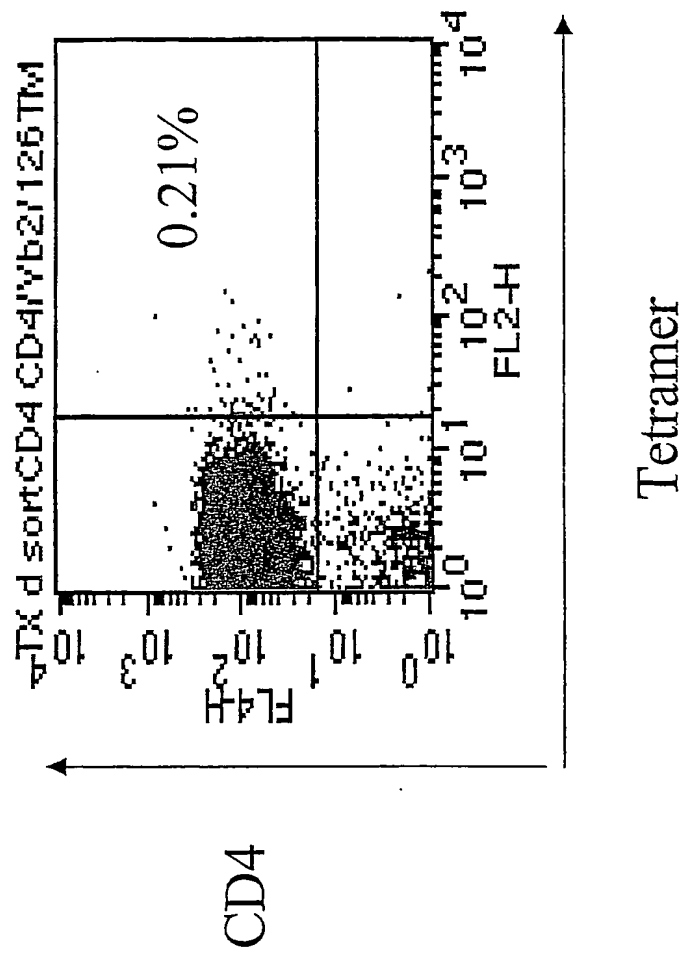


Figure 14

TCR transduced CD4+ T cells show pWT126-specific killing activity

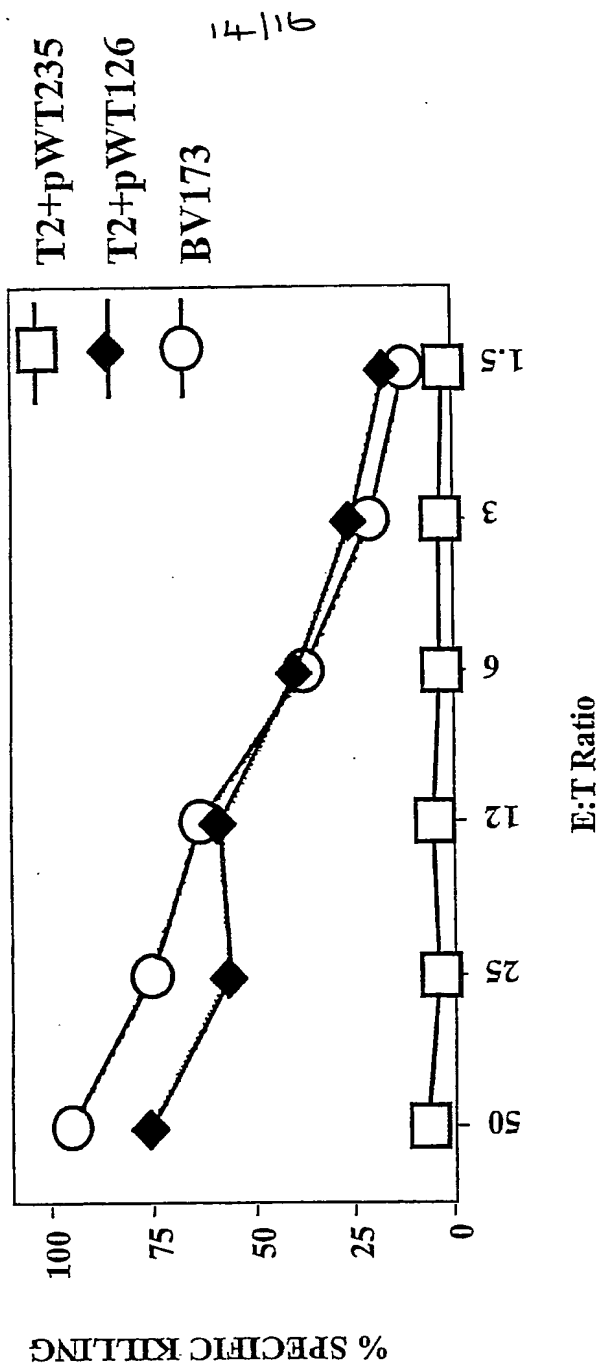
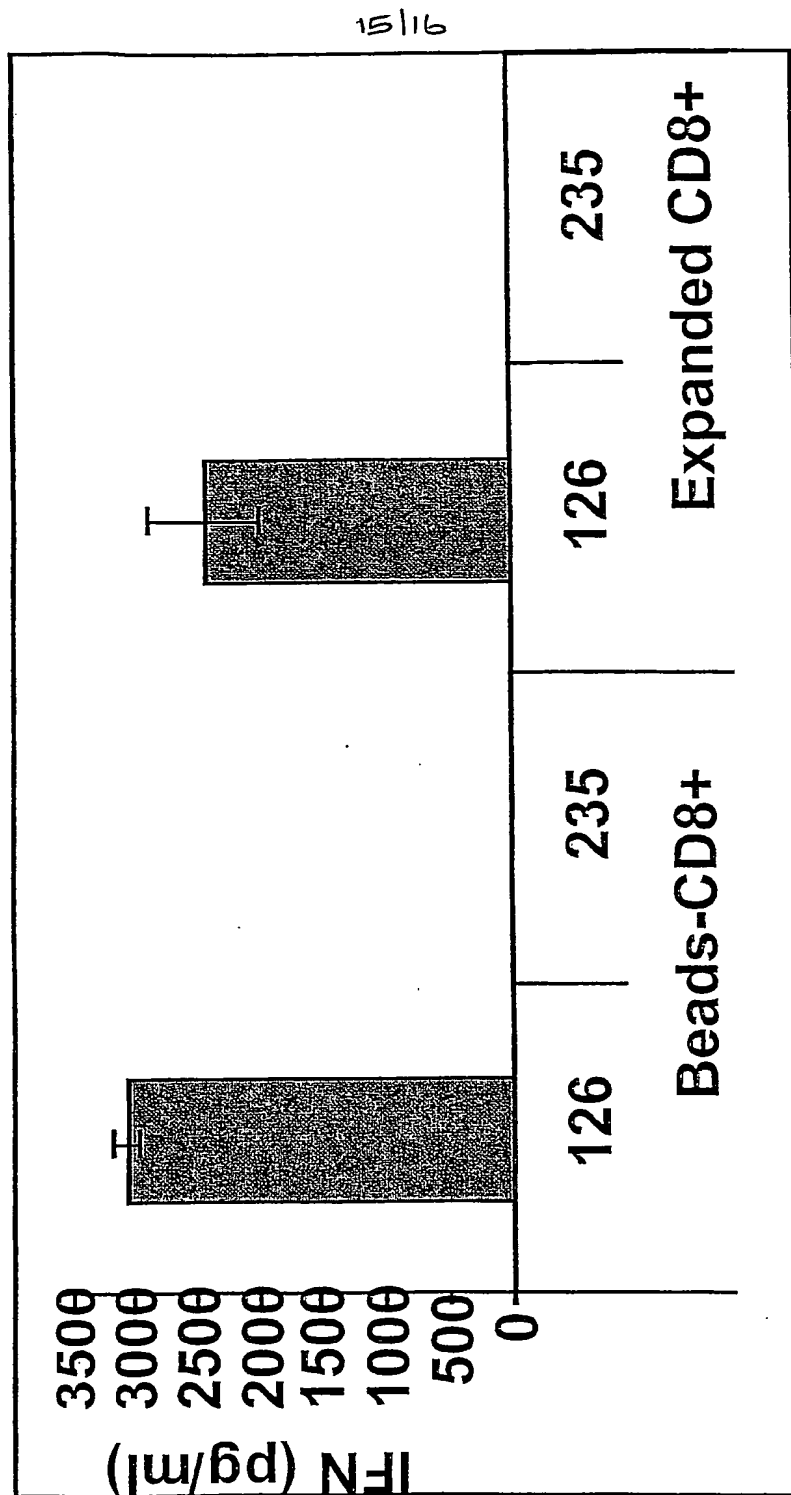


Figure 15

TCR transduced CD8+ T cells show pWT126-specific IFN- $\gamma$  production



After 20 hrs incubation

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Figure 16

